What Is Claimed Is:

1. A camera comprising:

light emitting means that projects a beam of light onto an object to be measured;

light receiving means that receives the light reflected on the object at a light receiving position corresponding to a distance to the object, and based on the light receiving position, outputs a long-range side signal that increases in value as the object is positioned further away from said camera at a certain intensity of the received light, and a short-range side signal that increases in value as the object is positioned closer to said camera at a certain intensity of the received light;

clamping means that compares said long-range side signal with a clamp signal, when said long-range side signal is larger than said clamp signal in value, outputs said long-range side signal; and when said long-range side signal is smaller than said clamp signal in value, outputs said clamp signal;

calculation means that calculates a ratio between said short-range side signal and a signal output from said clamping means to output an output ratio signal;

conversion means that compares said output ratio signal with a predetermined infinity determination threshold value so as to determine whether the value of said output ratio signal corresponds to the shorter range side than the value of said infinity determination threshold value or not, then in the former case converts said output ratio signal into a distance signal that is correlated with the distance of the object from said camera, and in the latter case converts said output ratio signal into a predetermined distance signal having a fixed value;

luminance measuring means that measures the luminance of an outside light; and

exposure control means that, when the luminance of the outside light measured by said luminance measuring means is lower than a predetermined switchover luminance, which is determined based on film sensitivity, controls the aperture value of lens to a fully open aperture value; and when the luminance of the outside light is higher than said switchover luminance, controls the aperture value of lens to increase according to the increase of the luminance of the outside light,

said infinity determination threshold value being set at the value that corresponds to the shorter range side among a first AF signal and a second AF signal,

said first AF signal corresponding to the infinity determination distance that is set up as the furthest distance measurable by said camera, and

said second AF signal being determined based on said switchover luminance.

2. A camera comprising:

light emitting means that projects a beam of light onto an object to be measured;

light receiving means that receives the light reflected on the object at a light receiving position corresponding to a distance to the object, and based on the light receiving position, outputs a long-range side signal that increases in value as the object is positioned further away from said camera at a certain intensity of the received light, and a short-range side signal that increases in value as the object is positioned closer to said camera at a certain intensity of the received light;

clamping means that compares said long-range side signal with a clamp signal, when said long-

range side signal is larger than said clamp signal in value, outputs said long-range side signal; and when said long-range side signal is smaller than said clamp signal in value, outputs said clamp signal;

calculation means that calculates a ratio between said short-range side signal and a signal output from said clamping means to output an output ratio signal;

conversion means that compares said output ratio signal with a predetermined infinity determination threshold value so as to determine whether the value of said output ratio signal corresponds to the shorter range side than the value of said infinity determination threshold value or not, then in the former case converts said output ratio signal into a distance signal that is correlated with the distance of the object from said camera, and in the latter case converts said output ratio signal into a predetermined distance signal having a fixed value;

luminance measuring means that measures the luminance of an outside light; and

exposure control means that, when the luminance of the outside light measured by said

luminance measuring means is lower than a predetermined switchover luminance, which is determined based on film sensitivity, controls the aperture value of lens to a fully open aperture value; and when the luminance of the outside light is higher than said switchover luminance, controls the aperture value of lens to increase according to the increase of the luminance of the outside light, wherein

a second AF signal value corresponding to said switchover luminance is set up as said infinity determination threshold value, and infinity signal value, which is a distance signal value corresponding to a infinity set distance, is within the range of a distance signal value corresponding to the range of permissible circle of confusion in the infinity determination distance, which is the nearest distance in the distance subjected to the infinity determination.

3. The camera according to Claim 1, wherein said AF signal is said output ratio signal.

4. The camera according to Claim 1, wherein an aperture in said camera is regulated to contract as said aperture value increases.

5. The camera according to Claim 1,

wherein in case said infinity determination threshold value is set at the value of said second AF signal, said fixed value of said predetermined distance signal is within the range of permissible circle of confusion of said camera when the object is placed at the point that yields said infinity determination threshold value.